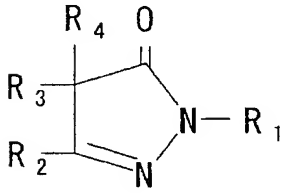
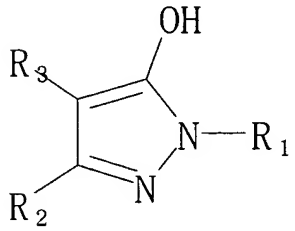
WHAT IS CLAIMED IS:

1. A inhibitor of protein modification products formation comprising as an active ingredient a compound which is introduced a substituent that inhibit the binding of vitamin B6 molecules (comprising of that derived from vitamin B6 molecules itself) to 1-substituted-, unsubstituted-3-substituted- or unsubstituted-2-pyrazolin-5-one at the 4-position in free form or salt form or intramolecular rearranged bodies thereof.

2. A inhibitor of protein modification products formation according to claim 1, wherein the compound as the active ingredient is selected from compounds of formula (I):



or formula (II)



[wherein R1 is substituted or unsubstituted aromatic ring;

and each of R2, R3 and R4 is a hydrogen atom or monovalent organic group, or alternatively R2 and R3 cooperate to form a condensed ring or R3 and R4 cooperate to represent a divalent organic group, provided that R3 and R4 are not simulataneously hydrogen atoms]
in free or salt form.

3. A inhibitor of protein modification products formation according to claim 2, wherein the R1 aromatic ring moiety is up to 20-membered carbocyclic or heterocyclic aromatic ring group optionally comprising of up to 4 hetero atoms and optionally comprising up to 3 substituents.

4. A inhibitor of protein modification products formation according to claim 2 or 3, wherein each of R2, R3 or R4 monovalent organic group independently straight chain or cyclic aliphatic, alicyclic or aromatic hydrocarbon group having up to 30 carbon atoms optionally comprising of up to 3 substituents, or halogen, nitro, amino, hydroxy, thiol, carboxy, carboxy (lower) alkyl, lower alkoxycarbonyl, formyl, lower alkanoyl, lower alkylamino, di(lower) alkylamino, lower alkanoylamino, aryl (lower) alkanoyl, aryloxy-amino, sulfonic acid or 3- to 7-membered heterocyclic group optionally comprising of substituents.

5. A inhibitor of protein modification products formation according to claim 2 or 3, wherein the R2 and the R3 cooperate to form a condensed ring which is 5- or 6-membered saturated carboncyclic ring optionally comprising of substituents.

6. A inhibitor of protein modification products formation according to claim 2 or 3, wherein the R3 and the R4 cooperate to form bivalent organic group which is selected from phenylmethylene, phenyl-alkenylmethylene, quinolinyl-methylene, furanyl-methylene, diazolyl-methylene, aminomethylene, di (lower) alkylamino-methylene, pyridyl-methylene and thio-phenylmethylene optionally comprising of substituents.

7. A inhibitor of protein modification products formation accroding to any one of claims 3 to 7, wherein the substituents are selected from lower alkyl, lower alkenyl, lower alkoxy, lower alkenyloxy, lower alkanoyl, halo (lower) alkyl, carboxyl, lower alkoxycarbonyl, carboxy (lower) alkyl, halogen, nitro, amino, lower alkylamino, di (lower) alkylamino, lower alkanoylamino, hydroxy, thiol, hydroxysulfonyl, aminosulfonyl, aryl (lower) alkanoyl, aryloxyamino, aryl, aryl (lower)alkyl, cycro (lower) alkyl,

cycro (lower) alkenyl, cycro (lower) alkyl (lower) alkyl and 3- to 7- membered heterocyclic group.

8. A inhibitor of protein modification products formation according to claim 2, wherein the R1 is phenyl group, the R2 is methyl group, the R3 and the R4 cooperate to form 3-hydroxy-5-hydroxymethyl-2-methylpyridin-4-yl-methylene in formula (I).

9. A inhibitor of protein modification products formation according to claim 2, wherein the R1 is phenyl group, the R2 is methyl group, the R3 is 6-methyl-1,3-dihydrofuro-[3,4-c]-pyridin-7-ol group in formula (II).

10. A inhibitor of protein modification products formation according to any one of claims 1 to 9, wherein the protein modification products is selected from AGEs, ALEs and combination thereof.

11. A inhibitor of protein modification products formation according to claim 10, wherein the protein modification products is AGEs.

12. A inhibitor of protein modification products formation according to claim 11, wherein the AGEs is

pentosidine.

13. A renal tissue protecting agent comprising the inhibitor of protein modification products formation according to any one of claims 1 to 12.

14. A peritoneal dialysate comprising the inhibitor of protein modification products formation according to any one of claims 1 to 12.

15. A hemodialysis fluid comprising the inhibitor of protein modification products formation according to any one of claims 1 to 12.

16. A method for reduction of the amount of a carbonyl compound(s) in a liquid sample, which comprises contacting the inhibitor of protein modification products formation according to any one of claims 1 to 12 with the liquid sample.

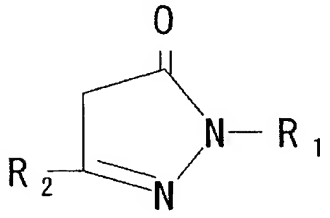
17. A method for suppression of the formation of a protein modification products in the blood or peritoneal dialysate of a patient, which comprises contacting the inhibitor of protein modification products formation according to any one of claims 1 to 12 with said blood or

peritoneal dialysate.

18. A method for suppression of the vitamin B6 deficiency caused by said inhibitor of protein modification products formation, which comprises introducing a substituent that inhibit the binding of vitamin B6 molecules (comprising of that derived from vitamin B6 molecules itself) to 1-substituted-, unsubstituted-3-substituted- or unsubstituted-2-pyrazolin-5-one at the 4-position in free form or salt form

, which is useful as formation of protein modification products inhibiting agent.

19. A method according to claim 18, wherein the 1-substituted-, unsubstituted-3-substituted- or unsubstituted-2-pyrazolin-5-one is formula



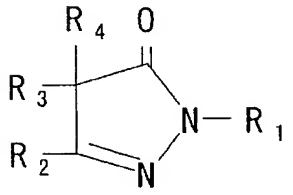
[wherein R1 is hydrogen atom or substituted or unsubstituted aromatic ring; and R2 is hydrogen atom or monovalent organic group].

20. A method according to claim 18 or 19, wherein

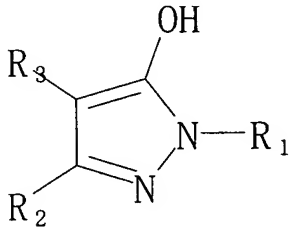
the substituent, which is introduced at 4-position and inhibits binding of vitamin B6 molecules, is selected from organic group.

21. A compound introduced a substituent that inhibit the binding of vitamin B6 molecules (comprising of that derived from vitamin B6 molecules itself) to 1-substituted-, unsubstituted-3-substituted- or unsubstituted-2-pyrazolin-5-one at the 4-position in free form or salt form, or intramolecular rearranged bodies thereof.

22. A compound of formula (I)



or formula (II)



[wherein R1 is substituted or unsubstituted aromatic ring; and each of R2, R3 and R4 is a hydrogen atom or monovalent organic group, or alternatively R2 and R3 cooperate to form a condensed ring or R3 and R4 cooperate

to represent a divalent organic group, provided that R3 and R4 are not simulataneously hydrogen atoms]
in free or salt form.

23. A compound according to claim 22, wherein the R1 is phenyl group, the R2 is methyl, the R3 and the R4 cooperate to form 3-hydroxy-5-hydroxymethyl-2-methylpyridin-4-yl-methylene group.

24. A compound according to claim 22, wherein the R1 is phenyl group, the R2 is methyl group, the R3 is 6-methyl-1,3-dihydrofuro-[3,4-c]-pyridin-7-ol group.

25. Use of the compound according to any one of claims 21 to 24 for preparation of inhibitor of protein modification products formation.

26. A method for treatment of a disease mediated by the production of a protein modification products, which comprises administering a therapeutically effective amount of the compound according to any one of claims 21 to 24 to a patient in need of such treatment.